

## REMARKS

In a Final Office Action mailed on August 11, 2009, claims 1, 7, 23, 25, 33, 35, 42, 43 and 45 were rejected under 35 U.S.C. § 102(b) as being anticipated by Frye; claims 17-19, 20 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Frye in view of Tureehkek; claims 6 and 44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Frye in view of Chawla; claims 1, 7, 23, 25, 33, 35, 42, 43 and 45 claims 17-19, 20 and 30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Willow; and claims 6 and 44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Willow in view of Chawla.

In order to anticipate a claim under 35 U.S.C. § 102, a single reference must teach each and every element of the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). In fact, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). Furthermore, in order for a reference to be anticipatory, "[its] elements must be arranged as required by the claim." *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990), *cited in* M.P.E.P. § 2131.

Regarding the § 102 rejection of claim 1 in view of Frye, Frye fails to anticipate claim 1 for at least the reason that Frye fails to disclose a shaped charge having a wall that defines a recessed region that receives a liner and an explosive, where at least one axially oriented slot exists in the wall. It appears that the Examiner contends that either Frye's groove 26/30, 32 or 34 discloses the axially oriented slot of claim 1. However, the groove 26/30 is radially oriented and appears to define a recessed region for receiving a charge casing cap 10. The Examiner has failed to show, however, where Frye discloses that the groove 26/30 is axially oriented and fails to disclose where Frye allegedly discloses that the alleged charge case 16 is adapted to fracture about the groove 26/30.

The grooves 32 and 34 are located in the charge cap 10. Once again, however, the grooves 32 and 34 are radially, are not axially oriented; and Frye fails to disclose a charge case is adapted about the grooves 32 and 34. Furthermore, because these grooves 32 and 34 are located in the charge casing cap 10, neither of these slots are in a wall which defines a recessed region that receives an explosive and a liner. In other words, the grooves 32 and 34 are located in the cap and not in the body of the disclosed shaped charge case.

Thus, for at least any of the foregoing reasons, Frye fails to anticipate independent claim

Frye fails to anticipate independent claim 33 for similar reasons. In this regard, the method of claim 33 recites providing a shaped charge that includes a charge case that has a wall that defines a recessed region and further recites that the charge case defines at least one axially-oriented groove in the wall about which the charge is adapted to fracture. For at least the reason that are set forth above, Frye fails to disclose a number of features of claim 33, including providing a shaped charge having a charge case that has a wall that defines a recessed region, where at least one axially-oriented groove is in the wall.

Frye likewise fails to anticipate independent claim 42, a claim that recites a shaped charge including a charge case, which has a well that defines a recessed region to receive a liner and an explosive material, where the charge case defines at least one slot in the wall about which the charge is adapted to fracture.

Regarding the § 102 rejection of independent claim 1 in view of Willow, Willow discloses an expandable base bearing pile but fails to disclose or render obvious the claimed apparatus, as Willow fails to disclose a shaped charge. In this manner, claim 1 explicitly recites a combination of features, such as a shaped charge that includes a liner and an explosive, which are not disclosed by Willow. Therefore, regardless of whether Willow purportedly discloses an explosive and a liner, as contended by the Examiner, these elements are not part of a shaped charge, and as such, Willow fails to disclose the claimed combination of elements. Thus, Willow fails to anticipate independent claim 1.

For similar reasons, Willow fails to anticipate independent claims 33 and 42. In this regard, the method of independent claim 33 recites providing a shaped charge, which includes a charge case, a liner and an explosive; and the control debris perforating system of claim 42 includes shaped charge, which includes a charge case, a liner and an explosive material.

Regarding the § 103 rejection of independent claim 17, to make a determination under 35 U.S.C. § 103, several basic factual inquiries must be performed, including determining the scope and content of the prior art, and ascertaining the differences between the prior art and the claims at issue. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459 (1965). Moreover, as the U.S. Supreme Court held, it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine reference teachings in the manner that the claimed invention does. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 U.S.P.Q.2d 1385 (2007).

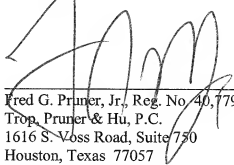
The § 103 rejection of independent claim 17 is deficient for at least the reason that the hypothetical combination of Frye and Turechek fails to disclose a charge case that defines at least one axially oriented slot in a wall about which the charge case is adapted to fracture in response to detonation of an explosive material. In this manner, as discussed above, Frye fails to disclose or render obvious the above-recited combination of elements, and Turechek fails to cure the deficiencies of Frye. Turechek is merely relied on by the Examiner for its purported disclosure of a perforating gun string. However, Turechek fails to disclose or render claim limitations that are neither disclosed nor rendered obvious by Frye, such as providing a perforating string that has shaped charges that include a charge case that has a wall defining a recessed region that receives an explosive material and a liner, where the charge case defines at least one axially oriented slot in the wall about which the charge case is adapted to fracture in response to the detonation of the explosive material. Furthermore, the Final Office Action fails to provide any plausible reason to explain why one of skill in the art in possession of Frye and Turechek would have derived the missing claim limitations when neither reference discloses them.

Dependent claims 6, 7, 18, 19, 23, 25, 28, 30, 35 and 43-45 overcome the §§ 102 and 103 rejections for at least the same reasons as the claims from which they depend.

CONCLUSION

In view of the foregoing, Applicant respectfully requests withdrawal of the §§ 102 and 103 rejections and a favorable action in the form of a Notice of Allowance. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (SHL.0227US).

Respectfully submitted,



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